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NEW KANSAS FUNGI.*

BY J. B. ELLIS, AND W. A. KELLERMAN.

Peronospora Oxybaphi, E. & K.—On *O. nyctagineus.* Manhattan, Ks., June, 1884. Conidiophores simple below, about 3 times dichotomously branched above, the ultimate divisions stout and slightly curved; conidia elliptical, pale violet-brown, 20—26 x 12—15*u.* Oospores 35—40*u*, rusty brown, epispore rough.

Puccinia Lithospermi, E. & K.— On *Lithospermum canescens,* Manhattan, Ks. Æcidium and uredo not seen. Teletuospores—sori amphigenous, round, black, soon naked, scattered, small, (½mm.) spores elongated, mostly attenuated above, strongly constricted, of a deep reddish brown above, paler below, 32 — 45 x 20 — 23*u*, epispore smooth, thickened above so as to form an obtuse point which is often oblique but sometimes the apex is regularly rounded, pedicels rather stout, as long as or longer than the spore.

Cercospora condensata, E. & K.—On leaves of *Gleditschia triacanthos.* Manhattan, Ks., July, '84. On small (1 —2 mm.)brown or dirty white round spots with an obscure dark border. Hyphæ mostly epiphyllous, brown, (continuous) ? obtuse, subdenticulate above, 30 — 80 x 4—5*u*, densely compacted so as to form little black tubercles much resembling perithecia; conidia slender or concave-cylindrical, nucleate and pale brown, becoming 6—9 septate, 60—75 x 4 *u.*—var. *Desmanthi* (on *D. brachylobus*, Great Bend, Ks.) differs in its shorter hyphae and shorter (30—35 *u*) 1-septate conidia and in absence of any very definite spots, differences which are probably due to immaturity.

Cercospora Fraxini, E. & K.—On living leaves of *Fraxinus*, Manhattan, Ks., Sept. '84. Scattered over the lower surface of the leaf on small, rusty brown spots, limited by the veinlets of the leaf and forming at length, by confluence, much larger (½—1 cm.) patches with an irregular outline. The leaf is also mottled above with rusty brown in which small, light colored spots mark the position of the denser tufts beneath. Hyphæ densely tufted, nearly hyaline, short, (16—25 *u*) lax, slightly swollen at the base, bearing the cylindrical, nearly hyaline (with a slight yellowish tinge) 3—4 septate, granular and nucleate conidia 70,—100 x 5—6*u* more or less curved and ends obtuse. Accompanied by an immature *Sphærella* of which it is probably the conidial stage. This species varies considerably from the usual type of *Corcospora* standing rather equivocally between this genus and *Ramularie.*

Cercospora Diantheræ, E. & K.—On *Dianthera Americana*, Topeka, Ks.,(Popenoe.) Sept. 1884. On round white spots, 2—4 mm. in diameter, mostly included in brown dead areas of the leaf which are limited by a dark, narrow border. Hyphæ in small, loose spreading tufts, mostly 3—10 in each tuft, brown, continuous or sparingly and faintly septate, more or less geniculate and toothed above, 50—75 x 4½—5*u*, conidia slender, linear-lanceolate, 50—80 x 4—5*u*, multiseptate, hyaline. Quite different from *C. consociata Winter.*

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*Collected by W. A Kellerman during the season of 1884.

CERCOSPORA GLANDULOSA, E. & K.—On leaves of *Ailanthus glandulosa*, Manhattan, Ks., March '84. Hypophyllous on reddish brown spots (⅛—¼ cm.) limited above by a slightly raised border; hyphæ cæspitose, brown, stout, subundulate above, 50—70 x 4—5 *u*; conidia hyaline slender, 3—5 septate, 70—100 x 3—3½ *u*, gradually narrowed above. The spots become at length dirty white above.

RAMULARIA EUONYMI, E. & K.—On leaves of *E. atropurpureus*, Manhattan, Ks., Oct. '84. Amphigenous, on dirty white spots, 2—3 mm. in diam., with a dark but scarcely raised border. Hyphæ, arising from a tubercular base, cæspitose, hyaline, simple and subentire or slightly toothed above; conidia concatenate, oblong-cylindrical, mostly 1—septate (occasionally 2—3—septate) hyaline, 20—25 x 3 *u*. Accompanied by minute, black, immature perithecia scattered over dead parts of the leaf the whole being probably the conidial and pycnidial stage of some Sphærella. This has much the same general appearance as *Cercospora Euonymi*, Ell., but the spots are larger and more irregular in shape without any distinct colored border, and the character of the conidia show it to be quite distinct from that species.

ASCOCHYTA ATRIPLICIS, Desm. var. EFFUSA, E. & K.—On fading leaves of *Atriplex*, Great Bend, Ks., Aug. '84. Differs from the normal form in the absence of spots, the perithecia 100—120 *u* in diam., being evenly scattered over the surface of the leaves and filled with oblong-cylindrical 1—septate, slightly constricted, brownish, 8—12 x 4—5 *u* spores.

GLŒOSPORIUM FUSARIOIDES, E. & K.—On leaves of *Asclepias Cornuti*, Great Bend, Ks., Aug. '84. Spore masses ¼—¾ mm. in diam. Subcuticular, scattered irregularly or collected in groups, in which case the part of the leaf occupied assumes a dark brownish look. The spores ooze out on both surfaces of the leaf but more abundantly above, being of an oblong-cylindrical shape, 20—30 x 5—6 *u*, filled with greenish granular matter and globose transparent nuclei. The spores spring from elongated cells (basidia) arising directly from the inner surface of the hymeneal cavity.

ASTERINA CELASTRI, E. & K.—On living leaves of *C. scandens*, Manhattan, Ks., Nov, 1884. Perithecia hypophyllous, either collected in groups or scattered, convex, orbicular, (¼mm.) black, with a scanty mycelium of brown radiating threads around the base; asci oblong-ovate, 12—15 x 6—7 *u*, filled with granular matter (immature). The parts of the leaf occupied by the groups of perithedia are a little darker than the sursounding portions.

Phyllosticta Amaranthi, E. & K.—On leaves of *A. retroflexus*, Garden City, Ks., Aug. '84. On reddish brown (2—4 mm.) spots with a dark, slightly raised border. Perithecia 6—12 on a spot, epiphyllous, erumpent, rather large; spores oblong-elliptical, 2-nucleate, 9—11 x 3—5 *u*. Differ from *P. Chenopodii, West.* in its larger perithecia and spores and in the different character of the spots.

Phyllosticta abortiva, E. & K.—On leaves of *Menispermum Canadense*, Manhattan, Ks., Nov. '84. Spots brown, suborbicular, (¼—1 cm.) with a definite darker colored but scarcely raised margin. Perithecia innate, punctiforin, minute, black and quite thickly scattered over the spots, visible on both sides of the leaf; spores imperfectly developed.

NEW FUNGI FROM IOWA.

BY J. B. ELLIS AND E. W. HOLWAY.

The species here described were collected by Mr. Holway in the vicinity of Decorah, Iowa, mostly during the summer and fall of 1884.

Hypocrea cubispora, E. & Hol.—Stroma tuberculiform, obconic, subplicate below, about 1 cm. broad and ¾ cm. high, lemon yellow within and without, surface punctate with the black ostiola; perithecia peripheric, globose; asci cylindrical containing 8 sub ubical, dark olive or brownish black, 2-nucleate, 4—6 x 3—4 *u*, sporidia, some of which are obscurely uniseptate. On an old log, August.

Diatrypella Populi, E. & Hol.—Perithecia cartilaginous, ovate or subangular by mutual compression (½—¾ mm.) closely packed in an orbicular lens-shaped stroma, 2—3 mm. in diam., dark brown outside, dirty white within and seated on the surface of the inner bark; ostiola short, stout, tips obscurely 4-cleft and united in an obscure black disk or piercing the epidermis separately; asci long clavate, 100—115 x 15 *u*; sporidia cylindrical, yellowish, curved, 10—12 x 1½—2 *u*. The surface of the wood is blackened except directly under the stroma where it retains its light color. On dead limbs of Populus, Aug. 1883.

Valsa Menispermi, E. & Hol.—Perithecia circinating in a cortical stroma without any circumscribing line, 6—10 in number and about ¼ mm. in diam., with membranaceous, coarsely cellular walls; ostiola very short, united and concealed in a circular disk ½—⅛ mm. in diam. and entirely covered by the epidermis through which its outline is seen as a small black circle with a black dot in the center; asci clavate, 70 x 12 *u*; sporidia crowded, cylindrical, yellowish, curved, 15—20 x 4—6 *u*. On stripping off the epidermis the perithecia sometimes adhere to it and